



ST_A181-08US Sequence Listing (Amended).txt
SEQUENCE LISTING

<110> Japan Science and Technology Agency
National Institute of Advanced Industrial Science and Technology

<120> Producing process of plants with sterility, plants produced by the process,
and use thereof

<130> A181-08PCT

<150> JP 2004-2192
<151> 2004-01-07

<150> JP 2004-93796
<151> 2004-03-26

<150> JP 2004-221592
<151> 2004-07-29

<150> JP 2004-231544
<151> 2004-08-06

<160> 164

<170> PatentIn Ver. 2.1

<210> 1
<211> 12
<212> PRT
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 1
Asp Leu Asp Leu Asn Leu Ala Pro Pro Met Glu Phe
1 5 10

<210> 2
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 2
Leu Asp Leu Asn Leu Ala Pro Pro Met Glu Phe
1 5 10

<210> 3
<211> 11
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Page 1

JST_A181-08US Sequence Listing (Amended).txt
Synthesized Amino Acid Sequence

<400> 3
Leu Asp Leu Asn Leu Ala Ala Ala Ala Ala Ala
1 5 10

<210> 4
<211> 10
<212> PRT
<213> Artificial Sequence

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Synthesized Amino Acid Sequence

<400> 4
Leu Asp Leu Glu Leu Arg Leu Gly Phe Ala
1 5 10

<210> 5
<211> 6
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<213> Artificial Sequence

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Synthesized Amino Acid Sequence

<400> 5
Asp Leu Glu Leu Arg Leu
1 5

<210> 6
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Synthesized Amino Acid Sequence

<400> 6
Leu Asp Leu Gln Leu Arg Leu Gly Tyr Tyr
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<210> 7
<211> 7
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 7
Leu Asp Leu Glu Leu Arg Leu
1 5

JST_A181-08US Sequence Listing (Amended).txt

<210> 8

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 8

Leu Asp Leu Glu Leu Ala Ala Ala Ala Ala
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<210> 9

<211> 10

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 9

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<210> 10

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<212> PRT

<213> Artificial Sequence

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Synthesized Amino Acid Sequence

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Leu Asp Leu Glu Leu Arg Leu Gly
1 5

<210> 11

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

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Phe Asp Leu Asn Phe Ala Pro Leu Asp Cys Val
1 5 10

<210> 12

<211> 11

<212> PRT

<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Page 3

JST_A181-08US Sequence Listing (Amended).txt
Synthesized Amino Acid Sequence

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Synthesized Amino Acid Sequence

<400> 13
Phe Gln Phe Asp Leu Asn Phe Pro Pro Leu Asp Cys Val
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<210> 14
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1 5

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Synthesized Amino Acid Sequence

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Val Gly Pro Thr Val Ser Asp Ser Ser Ser Ala Val Glu Glu Asn Gln
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Tyr Asp Gly Lys Arg Gly Ile Asp Leu Asp Leu Asn Leu Ala Pro Pro
20 25 30

Met Glu Phe
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<210> 16
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Synthesized Amino Acid Sequence

JST_A181-08US Sequence Listing (Amended).txt

<400> 16
Asp Leu Asp Leu Glu Leu Arg Leu Gly Phe Ala
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Synthesized Amino Acid Sequence

<400> 17
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<210> 18
<211> 204
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<400> 18
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1 5 10 15

Ala Arg Thr Ser Pro Trp Ser Tyr Gly Asp Tyr Asp Asn Cys Gln Gln
20 25 30

Asp His Asp Tyr Leu Leu Gly Phe Ser Trp Pro Pro Arg Ser Tyr Thr
35 40 45

Cys Ser Phe Cys Lys Arg Glu Phe Arg Ser Ala Gln Ala Leu Gly Gly
50 55 60

His Met Asn Val His Arg Arg Asp Arg Ala Arg Leu Arg Leu Gln Gln
65 70 75 80

Ser Pro Ser Ser Ser Thr Pro Ser Pro Pro Tyr Pro Asn Pro Asn
85 90 95

Tyr Ser Tyr Ser Thr Met Ala Asn Ser Pro Pro Pro His His Ser Pro
100 105 110

Leu Thr Leu Phe Pro Thr Leu Ser Pro Pro Ser Ser Pro Arg Tyr Arg
115 120 125

Ala Gly Leu Ile Arg Ser Leu Ser Pro Lys Ser Lys His Thr Pro Glu
130 135 140

Asn Ala Cys Lys Thr Lys Lys Ser Ser Leu Leu Val Glu Ala Gly Glu
145 150 155 160

Ala Thr Arg Phe Thr Ser Lys Asp Ala Cys Lys Ile Leu Arg Asn Asp
165 170 175

Glu Ile Ile Ser Leu Glu Leu Glu Ile Gly Leu Ile Asn Glu Ser Glu
180 185 190

Gln Asp Leu Asp Leu Glu Leu Arg Leu Gly Phe Ala
Page 5

<210> 19
<211> 30
<212> PRT
<213> Arabidopsis thaliana

<400> 19
Asn Asp Glu Ile Ile Ser Leu Glu Leu Glu Ile Gly Leu Ile Asn Glu
1 5 10 15

Ser Glu Gln Asp Leu Asp Leu Glu Leu Arg Leu Gly Phe Ala
20 25 30

<210> 20
<211> 6
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<210> 21
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Synthesized Amino Acid Sequence

<400> 21
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<210> 22
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Synthesized Amino Acid Sequence

<400> 22
Asp Leu Gln Leu Arg Leu
1 5

<210> 23
<211> 6
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JST_A181-08US Sequence Listing (Amended).txt

<220>
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Synthesized Amino Acid Sequence

<400> 23
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1 5

<210> 24
<211> 6
<212> PRT
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<220>
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Synthesized Amino Acid Sequence

<400> 24
Glu Leu Glu Leu Arg Leu
1 5

<210> 25
<211> 6
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<220>
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Synthesized Amino Acid Sequence

<400> 25
Asn Leu Glu Leu Arg Leu
1 5

<210> 26
<211> 6
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Synthesized Amino Acid Sequence

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Gln Leu Glu Leu Arg Leu
1 5

<210> 27
<211> 6
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Synthesized Amino Acid Sequence

<400> 27
Asp Leu Glu Leu Asn Leu
1 5

JST_A181-08US Sequence Listing (Amended).txt

<210> 28
<211> 6
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Synthesized Amino Acid Sequence

<400> 28
Asp Leu Glu Leu Gln Leu
1 5

<210> 29
<211> 6
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Synthesized Amino Acid Sequence

<400> 29
Thr Leu Glu Leu Arg Leu
1 5

<210> 30
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Synthesized Amino Acid Sequence

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1 5

<210> 31
<211> 6
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Synthesized Amino Acid Sequence

<400> 31
Ser Leu Glu Leu Arg Leu
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<210> 32
<211> 6
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JST_A181-08US Sequence Listing (Amended).txt

<220>
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Synthesized Amino Acid Sequence

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Synthesized Amino Acid Sequence

<400> 33
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<210> 34
<211> 6
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Synthesized Amino Acid Sequence

<400> 34
Asp Leu Ser Leu Arg Leu
1 5

<210> 35
<211> 6
<212> PRT
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Synthesized Amino Acid Sequence

<400> 35
Asp Leu His Leu Arg Leu
1 5

<210> 36
<211> 6
<212> PRT
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Synthesized Amino Acid Sequence

<400> 36
Asp Leu Glu Phe Arg Leu
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JST_A181-08US Sequence Listing (Amended).txt

<210> 37
<211> 6
<212> PRT
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Synthesized Amino Acid Sequence

<400> 37
Asp Phe Glu Leu Arg Leu
1 5

<210> 38
<211> 6
<212> PRT
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Synthesized Amino Acid Sequence

<400> 38
Ser Leu Asp Leu His Leu
1 5

<210> 39
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Synthesized Amino Acid Sequence

<400> 39
Asp Leu Thr Leu Lys Leu
1 5

<210> 40
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Asp Leu Ser Leu Lys Leu
1 5

<210> 41
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JST_A181-08US Sequence Listing (Amended).txt

<220>
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Synthesized Amino Acid Sequence

<400> 41
Leu Asp Leu Asn Leu
1 5

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Synthesized Amino Acid Sequence

<400> 42
Leu Asp Leu Glu Leu
1 5

<210> 43
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Synthesized Amino Acid Sequence

<400> 43
Phe Asp Leu Asn Phe
1 5

<210> 44
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Synthesized Amino Acid Sequence

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Phe Asp Leu Asn Ile
1 5

<210> 45
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<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

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Phe Asp Leu Asn
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JST_A181-08US Sequence Listing (Amended).txt

<210> 46
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Synthesized Amino Acid Sequence

<400> 46
Leu Asp Leu Glu Leu Arg Leu
1 5

<210> 47
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Synthesized Amino Acid Sequence

<400> 47
Leu Asp Leu Gln Leu Arg Leu
1 5

<210> 48
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<220>
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Synthesized Amino Acid Sequence

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Leu Asp Leu Asp Leu Arg Leu
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<210> 49
<211> 8
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Synthesized Amino Acid Sequence

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Asp Leu Asp Leu Glu Leu Arg Leu
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JST_A181-08US Sequence Listing (Amended).txt

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Synthesized Amino Acid Sequence

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1 5

<210> 51
<211> 8
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Synthesized Amino Acid Sequence

<400> 51
Asp Leu Asp Leu Asp Leu Arg Leu
1 5

<210> 52
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Synthesized Amino Acid Sequence

<400> 52
Leu Asp Leu Asp Leu Glu Leu Arg Leu
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Synthesized Amino Acid Sequence

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1 5

<210> 54
<211> 9
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Synthesized Amino Acid Sequence

<400> 54
Leu Asp Leu Asp Leu Asp Leu Arg Leu
1 5

JST_A181-08US Sequence Listing (Amended).txt

<210> 55
<211> 6
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<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 55
Asp Leu Gln Leu Arg Leu
1 5

<210> 56
<211> 36
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<213> Artificial Sequence

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<400> 56
gatcttgatec ttaaccttgc tccacacctatg gaattt 36

<210> 57
<211> 36
<212> DNA
<213> Artificial Sequence

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Synthesized DNA Sequence

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aaattccata ggtggagcaa ggttaagatc aagatc 36

<210> 58
<211> 33
<212> DNA
<213> Artificial Sequence

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Synthesized DNA Sequence

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cttgatctta actttgctcc acctatggaa ttt 33

<210> 59
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<213> Artificial Sequence

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Synthesized DNA Sequence

JST_A181-08US Sequence Listing (Amended).txt

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aaattccata ggtggagcaa ggttaagatc aag 33

<210> 60
<211> 33
<212> DNA
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Synthesized DNA Sequence

<400> 60
cttgatctta actttgctgc tgctgctgct gct 33

<210> 61
<211> 33
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 61
agcagcagca gcagcagcaa ggttaagatc aag 33

<210> 62
<211> 30
<212> DNA
<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 62
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<210> 63
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<212> DNA
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Synthesized DNA Sequence

<400> 63
agcgaaaccc aaacggagtt ctagatccag 30

<210> 64
<211> 18
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JST_A181-08US Sequence Listing (Amended).txt
<223> Description of Artificial Sequence:Artificially
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gatctagaac tccgtttg 18

<210> 65
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<220>
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Synthesized DNA Sequence

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caaacggagt tctagatc 18

<210> 66
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<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

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<210> 67
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<212> DNA
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Synthesized DNA Sequence

<400> 67
gtaataaccc aaacggagtt gtagatccag 30

<210> 68
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Synthesized DNA Sequence

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ctggatctag aactccgttt g 21

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JST_A181-08US Sequence Listing (Amended).txt

<220>
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caaacggagt tctagatcca g 21

<210> 70
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<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 70
ctggatcttag aactcgctgc cgcaaggct gca 33

<210> 71
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<212> DNA
<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 71
tgcagccgct gcggcagcga gttctagatc cag 33

<210> 72
<211> 30
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Synthesized DNA Sequence

<400> 72
ctggatcttag aactccgttt ggctgccgca 30

<210> 73
<211> 30
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Synthesized DNA Sequence

<400> 73
tgcggcagcc aaacggagtt ctagatccag 30

<210> 74
<211> 24

JST_A181-08US Sequence Listing (Amended).txt

<212> DNA
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<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

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<210> 75
<211> 24
<212> DNA
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<220>
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Synthesized DNA Sequence

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acccaaacgg agttctagat ccag 24

<210> 76
<211> 33
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<220>
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Synthesized DNA Sequence

<400> 76
ttcgatctta atttgcacc gttggattgt gtt 33

<210> 77
<211> 33
<212> DNA
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<220>
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Synthesized DNA Sequence

<400> 77
aacacaatcc aacggtgcaa aattaagatc gaa 33

<210> 78
<211> 33
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<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 78
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JST_A181-08US Sequence Listing (Amended).txt

<210> 79
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<220>
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Synthesized DNA Sequence

<400> 79
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<210> 80
<211> 39
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Synthesized DNA Sequence

<400> 80
tttcaattcg atcttaattt tccaccgttg gattgtgtt 39

<210> 81
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<400> 81
aacacaatcc aacgggtggaa aatataagatc gaattgaaa 39

<210> 82
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<400> 82
gatcttagatc tccgtttt 18

<210> 83
<211> 18
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<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 83
caaacggaga tcttagatc 18

JST_A181-08US Sequence Listing (Amended).txt

<210> 84
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Synthesized DNA Sequence

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gtgggtccata ctgtgtcgga ctcgtcctct gcagtggaaag agaaccaata tgatggaaaa 60
agaggaattt gatcttgatct taacccttgct ccacctatgg aattt 105

<210> 85
<211> 105
<212> DNA

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Synthesized DNA Sequence

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aaattccata ggtggagcaa ggttaagatc aagatcaatt cctctttcc catcatattt 60
gttctttcc actgcagagg acgactccga cacagtagga cccac 105

<210> 86
<211> 33
<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 86

gatctggatc tagaactccg tttgggttcc gct 33

<210> 87
<211> 33
<212> DNA

<213> Artificial Sequence

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Synthesized DNA Sequence

<400> 87

agcgaaaccc aaacggagtt ctagatccag atc 33

<210> 88
<211> 36
<212> DNA

<213> Artificial Sequence

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JST_A181-08US Sequence Listing (Amended).txt
Synthesized DNA Sequence

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cttgatctgg atctagaact ccgtttgggt ttcgct 36

<210> 89
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<220>
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Synthesized DNA Sequence

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agcgaaaccc aaacggagtt ctagatccag atcaag 36

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ccatggagct atggagatta tgataattgc caacaggatc atgattatct tctagggttt 120
tcatggccac caagatccta cacttgcagc ttctgcaaaa gggatttcag atcggctcaa 180
gcacttggtg gccacatgaa tgttcacaga agagacagag caagactcag attacaacag 240
tctccatcat catcttcaac accttctcct ccttacccta accctaatta ctcttactca 300
accatggcaa acttcctcc tcctcatcat tctcctctaa ccctatttcc aaccctttct 360
cctccatcct caccaagata tagggcaggt ttgatccgtt ccttggcccc caagtcaaaa 420
catacaccag aaaacgcctt taagactaag aaatcatctc ttttagtgga ggctggagag 480
gctacaaggt tcaccagtaa agatgcctgc aagatcctga ggaatgtga aatcatcagc 540
ttggagcttgg agattggttt gattaacgaa tcagagcaag atctggatct agaactccgt 600
ttgggtttcg cttaa 615

<210> 91
<211> 93
<212> DNA
<213> Arabidopsis thaliana

<400> 91
aatgatgaaa tcatcagctt ggagcttgag attggtttga ttaacgaatc agagcaagat 60
ctggatcttag aactccgttt gggttcgct taa 93

<210> 92
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 92
gatctaaacc tccgtctg 18

<210> 93
<211> 18

JST_A181-08US Sequence Listing (Amended).txt

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 93

cagacggagg ttttagatc

18

<210> 94

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 94

gatctagacc tccgtctg

18

<210> 95

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 95

cagacggagg tctagatc

18

<210> 96

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 96

gatctacagc tccgtctg

18

<210> 97

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 97

cagacggagc tgttagatc

18

JST_A181-08US Sequence Listing (Amended).txt

<210> 98
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 98
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<210> 99
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
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Synthesized DNA Sequence

<400> 99
caaacggagt cgttagatc 18

<210> 100
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 100
gagctagaac tccgtttg 18

<210> 101
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 101
caaacggagt tctagctc 18

<210> 102
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 102
aacctagaac tccgtttg 18

JST_A181-08US Sequence Listing (Amended).txt

<210> 103
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 103
caaacggagt tcttaggtt 18

<210> 104
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 104
cagctagaac tccgtttg 18

<210> 105
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 105
caaacggagt tcttagctg 18

<210> 106
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 106
gatctagaac tcaacttg 18

<210> 107
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

JST_A181-08US Sequence Listing (Amended).txt

<400> 107
caagttgagt tctagatc 18

<210> 108
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 108
gatctagaac tccagttg 18

<210> 109
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 109
caactggagt tctagatc 18

<210> 110
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 110
acgcttgaat taagactc 18

<210> 111
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 111
gagtcttaat tcaagcgt 18

<210> 112
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Page 25

JST_A181-08US Sequence Listing (Amended).txt
Synthesized DNA Sequence

<400> 112
gatcttgaat taacgctc 18

<210> 113
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 113
gagcgttaat tcaagatc 18

<210> 114
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 114
agccttgaat taagactc 18

<210> 115
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 115
gagtcttaat tcaaggct 18

<210> 116
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 116
gatcttgaat taaggctc 18

<210> 117
<211> 18
<212> DNA
<213> Artificial Sequence

JST_A181-08US Sequence Listing (Amended).txt

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 117
gaggcttaat tcaagatc

18

<210> 118
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 118
gatcttacct taagactc

18

<210> 119
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 119
gagtcttaag gtaagatc

18

<210> 120
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 120
gatcttagct taagactc

18

<210> 121
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 121
gagtcttaag ctaagatc

18

<210> 122
<211> 18
<212> DNA

JST_A181-08US Sequence Listing (Amended).txt
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 122
gatcttcaact taagactc

18

<210> 123
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 123
gagtcttaag tgaagatc

18

<210> 124
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 124
gatctcgaat ttctgtctc

18

<210> 125
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 125
gagacgaaat tcgagatc

18

<210> 126
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 126
gatttcgaac tacgtctc

18

<210> 127

JST_A181-08US Sequence Listing (Amended).txt

<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 127
gagacgtatg tcgaaaatc

18

<210> 128
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 128
tcgcattttt tacaccttg

18

<210> 129
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 129
cagggttaga tcaaggcgaa

18

<210> 130
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 130
gatcttacgc taaagctg

18

<210> 131
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 131
cagcttttagc gtaagatc

18

JST_A181-08US Sequence Listing (Amended).txt

<210> 132
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 132
gatcttagcc taaagctg

18

<210> 133
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 133
cagctttagg ctaagatc

18

<210> 134
<211> 232
<212> PRT
<213> Arabidopsis thaliana

<400> 134
Met Ala Arg Gly Lys Ile Gln Ile Lys Arg Ile Glu Asn Gln Thr Asn
1 5 10 15
Arg Gln Val Thr Tyr Ser Lys Arg Arg Asn Gly Leu Phe Lys Lys Ala
20 25 30
His Glu Leu Thr Val Leu Cys Asp Ala Arg Val Ser Ile Ile Met Phe
35 40 45
Ser Ser Ser Asn Lys Leu His Glu Tyr Ile Ser Pro Asn Thr Thr Thr
50 55 60
Lys Glu Ile Val Asp Leu Tyr Gln Thr Ile Ser Asp Val Asp Val Trp
65 70 75 80
Ala Thr Gln Tyr Glu Arg Met Gln Glu Thr Lys Arg Lys Leu Leu Glu
85 90 95
Thr Asn Arg Asn Leu Arg Thr Gln Ile Lys Gln Arg Leu Gly Glu Cys
100 105 110
Leu Asp Glu Leu Asp Ile Gln Glu Leu Arg Arg Leu Glu Asp Glu Met
115 120 125
Glu Asn Thr Phe Lys Leu Val Arg Glu Arg Lys Phe Lys Ser Leu Gly
130 135 140
Asn Gln Ile Glu Thr Thr Lys Lys Asn Lys Ser Gln Gln Asp Ile
145 150 155 160
Gln Lys Asn Leu Ile His Glu Leu Glu Leu Arg Ala Glu Asp Pro His
165 170 175
Tyr Gly Leu Val Asp Asn Gly Gly Asp Tyr Asp Ser Val Leu Gly Tyr
180 185 190
Gln Ile Glu Gly Ser Arg Ala Tyr Ala Leu Arg Phe His Gln Asn His
195 200 205
His His Tyr Tyr Pro Asn His Gly Leu His Ala Pro Ser Ala Ser Asp
210 215 220
Ile Ile Thr Phe His Leu Leu Glu
225 230

JST_A181-08US Sequence Listing (Amended).txt

<210> 135
<211> 699
<212> DNA
<213> Arabidopsis thaliana

<400> 135
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tattcaaaga gaagaaaatgg tttattcaag aaagcacatg agctcacggg tttgtgtat 120
gcttagggttt cgatttatcat gttctctagc tccacaacgc ttcatgagta tatcagccct 180
aacaccacaa cgaaggagat cgtagatctg taccaaacta tttctgtatgt cgatgttgg 240
gccactcaat atgagcgaat gcaagaaacc aagagggaaac tggtggagac aaatagaaat 300
ctccggactc agatcaagca gaggcttagt gagtgttgg acgagcttga cattcaggag 360
ctgcgtcgtc ttgaggatga aatggaaaac actttcaaac tcgttcgcga ggcgaaggtc 420
aatatctttg ggaatcagat cgagaccacc aagaaaaaga acaaaagtca acaagacata 480
caaaagaatc tcatacatga gctgaaacta agagctgaag atcctcacta tggactagta 540
gacaatggag gagattacga ctcaaggctt ggataccaaa tcgaagggtc acgtgcttac 600
gctcttcgtt tccaccagaa ccatcaccac tattacccca accatggcct tcatgcaccc 660
tctgcctctg acatcattac cttccatctt cttgaataa 699

<210> 136
<211> 365
<212> PRT
<213> Arabidopsis thaliana

<400> 136
Met Met Ser Lys Ser Met Ser Ile Ser Val Asn Gly Gln Ser Gln Val
1 5 10 15
Pro Pro Gly Phe Arg Phe His Pro Thr Glu Glu Glu Leu Leu Gln Tyr
20 25 30
Tyr Leu Arg Lys Lys Val Asn Ser Ile Glu Ile Asp Leu Asp Val Ile
35 40 45
Arg Asp Val Asp Leu Asn Lys Leu Glu Pro Trp Asp Ile Gln Glu Met
50 55 60
Cys Lys Ile Gly Thr Thr Pro Gln Asn Asp Trp Tyr Phe Phe Ser His
65 70 75 80
Lys Asp Lys Lys Tyr Pro Thr Gly Thr Arg Thr Asn Arg Ala Thr Ala
85 90 95
Ala Gly Phe Trp Lys Ala Thr Gly Arg Asp Lys Ile Ile Tyr Ser Asn
100 105 110
Gly Arg Arg Ile Gly Met Arg Lys Thr Leu Val Phe Tyr Lys Gly Arg
115 120 125
Ala Pro His Gly Gln Lys Ser Asp Trp Ile Met His Glu Tyr Arg Leu
130 135 140
Asp Asp Asn Ile Ile Ser Pro Glu Asp Val Thr Val His Glu Val Val
145 150 155 160
Ser Ile Ile Gly Glu Ala Ser Gln Asp Glu Gly Trp Val Val Cys Arg
165 170 175
Ile Phe Lys Lys Lys Asn Leu His Lys Thr Leu Asn Ser Pro Val Gly
180 185 190

JST_A181-08US Sequence Listing (Amended).txt

Gly Ala Ser Leu Ser Gly Gly Asp Thr Pro Lys Thr Thr Ser Ser
195 200 205

Gln Ile Phe Asn Glu Asp Thr Leu Asp Gln Phe Leu Glu Leu Met Gly
210 215 220

Arg Ser Cys Lys Glu Glu Leu Asn Leu Asp Pro Phe Met Lys Leu Pro
225 230 235 240

Asn Leu Glu Ser Pro Asn Ser Gln Ala Ile Asn Asn Cys His Val Ser
245 250 255

Ser Pro Asp Thr Asn His Asn Ile His Val Ser Asn Val Val Asp Thr
260 265 270

Ser Phe Val Thr Ser Trp Ala Ala Leu Asp Arg Leu Val Ala Ser Gln
275 280 285

Leu Asn Gly Pro Thr Ser Tyr Ser Ile Thr Ala Val Asn Glu Ser His
290 295 300

Val Gly His Asp His Leu Ala Leu Pro Ser Val Arg Ser Pro Tyr Pro
305 310 315 320

Ser Leu Asn Arg Ser Ala Ser Tyr His Ala Gly Leu Thr Gln Glu Tyr
325 330 335

Thr Pro Glu Met Glu Leu Trp Asn Thr Thr Ser Ser Leu Ser Ser
340 345 350

Ser Pro Gly Pro Phe Cys His Val Ser Asn Gly Ser Gly
355 360 365

<210> 137
<211> 1098
<212> DNA
<213> Arabidopsis thaliana

<400> 137
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aggtttcatc cgaccgagga agagctgttgc cagtattatc tccgaaagaa agttaatagc 120
atcgagatcg atcttgatgt cattcgcac gttgatctca acaagctcgac gccttggac 180
attcaagaga tggtaaaaat aggaacaacg ccacaaaacg actgttattt ctttagccac 240
aaggacaaaa aatatccgac gggaaacgaga actaacacag ccactgcggc tggattttgg 300
aaagcaactg gccgcgacaa gatcatatat agcaatggcc gtggaaattgg gatgagaaag 360
actcttggtt tcttacaaagg ccgagctcct cacggccaaa aatctgattt gatcatgcat 420
aatatagac tcgatgacaa cattatttcc cccgaggatg tcaccgttca tgaggtcgat 480
agtattatag gggaaagcatc acaagacgaa ggatgggtgg tgtgtcgat tttcaagaag 540
aagaatcttc acacaaaccct aaacagtccc gtcggaggag cttccctgag cggcggcgg 600
gatacggcga agacgacatc atctcagatc ttcaacggg atactctcgaa ccaattttttt 660
gaacttatgg ggagatcttg taaagaagag ctaaatcttg accctttcat gaaactccca 720
aacctcgaaa gccctaacag tcagggaaatc aacaactggc acgttaagctc tccccgacact 780
aatcataata tccacgtcag caacgtggtc gacactagct ttgttacttag ctgggcggct 840
ttagaccggc tcgtggccctc gcagcttaac ggacccacat catattcaat tacagccgtc 900
aatgagagcc acgtggggcca tgatcatctc gctttgcctt ccgtccgatc tccgtacccc 960
agcctaaacc ggtccgcttc gtaccacggc ggtttaacac aggaatatac accggagatg 1020
gagctatggaa atacgacgac gtcgtctcta tcgtcatcgcc ctggcccatt ttgtcacgtg 1080
tcgaatggta gtggataa 1098

<210> 138

JST_A181-08US Sequence Listing (Amended).txt

<211> 367

<212> PRT

<213> Arabidopsis thaliana

<400> 138

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1 5 10 15

Trp Ser Pro Glu Glu Asp Glu Lys Leu Ile Asn Tyr Ile Asn Ser Tyr
20 25 30

Gly His Gly Cys Trp Ser Ser Val Pro Lys His Ala Gly Thr Tyr Thr
35 40 45

His Ile His Gly Phe Cys Leu Gln Arg Cys Gly Lys Ser Cys Arg Leu
50 55 60

Arg Trp Ile Asn Tyr Leu Arg Pro Asp Leu Lys Arg Gly Ser Phe Ser
65 70 75 80

Pro Gln Glu Ala Ala Leu Ile Ile Glu Leu His Ser Ile Leu Gly Asn
85 90 95

Arg Trp Ala Gln Ile Ala Lys His Leu Pro Gly Arg Thr Asp Asn Glu
100 105 110

Val Lys Asn Phe Trp Asn Ser Ser Ile Lys Lys Lys Leu Met Ser His
115 120 125

His His His Gly His His His His Leu Ser Ser Met Ala Ser Leu
130 135 140

Leu Thr Asn Leu Pro Tyr His Asn Gly Phe Asn Pro Thr Thr Val Asp
145 150 155 160

Asp Glu Ser Ser Arg Phe Met Ser Asn Ile Ile Thr Asn Thr Asn Pro
165 170 175

Asn Phe Ile Thr Pro Ser His Leu Ser Leu Pro Ser Pro His Val Met
180 185 190

Thr Pro Leu Met Phe Pro Thr Ser Arg Glu Gly Asp Phe Lys Phe Leu
195 200 205

Thr Thr Asn Asn Pro Asn Gln Ser His His His Asp Asn Asn His Tyr
210 215 220

Asn Asn Leu Asp Ile Leu Ser Pro Thr Pro Thr Ile Asn Asn His His
225 230 235 240

Gln Pro Ser Leu Ser Ser Cys Pro His Asp Asn Asn Leu Gln Trp Pro
245 250 255

Ala Leu Pro Asp Phe Pro Ala Ser Thr Ile Ser Gly Phe Gln Glu Thr
260 265 270

Leu Gln Asp Tyr Asp Asp Ala Asn Lys Leu Asn Val Phe Val Thr Pro
275 280 285

Phe Asn Asp Asn Ala Lys Lys Leu Leu Cys Gly Glu Val Leu Glu Gly
290 295 300

Lys Val Leu Ser Ser Ser Pro Ile Ser Gln Asp His Gly Leu Phe
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JST_A181-08US Sequence Listing (Amended).txt
305 310 315 320

Leu Pro Thr Thr Tyr Asn Phe Gln Met Thr Ser Thr Ser Asp His Gln
325 330 335

His His His Arg Val Asp Ser Tyr Ile Asn His Met Ile Ile Pro Ser
340 345 350

Ser Ser Ser Ser Ser Pro Ile Ser Cys Gly Gln Tyr Val Ile Thr
355 360 365

<210> 139

<211> 1104

<212> DNA

<213> Arabidopsis thaliana

<400> 139

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cctaaacatg caggcactta tacacatata catgggttt gtttgcagag atgtggaaag 180
agttgtatgat taagatggat aaattatcta agacctgtat taaaacgtgg aagcttctt 240
cctcaagaag ctgcttttat cattgagctt cacagcatc ttggtaacag atgggctcaa 300
attgctaaac atctacatcg aagaacagat aacgagggtca agaatttctg gaactcgagc 360
attaaaaaaa agctcatgtc tcaccatcat cacggtcatc atcatcatca tctctttcc 420
atggcgagtt tgctcacaaa cttcccttat cacaatggat tcaaccctac tacagtgcac 480
gatgaaagtt caagattcat gtccaaatatac atcacaaaca ctaaccctaa tttcatcact 540
ccaagccatc tctctttcc ttctccatcat gttatgaccc cattgatgtt cccaaacctt 600
agagaaggag atttcaagtt tctaaccaca aacaacccaa accaatctca tcaccatgat 660
aataaccatt acaacaaccc cgacattttgc tcaccacac caactataaa caatcatcat 720
caacccatc tttcttcttg tcctcatgtat aataatctcc aatggccagc gttaccagat 780
ttcccagcga gtaccatttc tggttccaa gaaacccttc aagattatga tgatgctaat 840
aaactcaacg tgggggtgac accattcaac gataatgcca aaaagttt atgtggagaa 900
gttctcgaag gcaaagtact atcttccctcc tcaccaattt cacaagatca cggccctttt 960
cttccccacca cgtacaactt tcaaattgact tctacgagtg atcatcaaca tcacatcatcg 1020
gtggactcat acatcaatca catgatcata ccatcatcat cctcatcgat gccaatctct 1080
tgtggacatg acgtcataac ttaa 1104

<210> 140

<211> 253

<212> PRT

<213> Arabidopsis thaliana

<400> 140

Met Thr Ala Tyr Gln Ser Glu Leu Gly Gly Asp Ser Ser Pro Leu Arg
1 5 10 15

Lys Ser Gly Arg Gly Lys Ile Glu Ile Lys Arg Ile Glu Asn Thr Thr
20 25 30

Asn Arg Gln Val Thr Phe Cys Lys Arg Arg Asn Gly Leu Leu Lys Lys
35 40 45

Ala Tyr Glu Leu Ser Val Leu Cys Asp Ala Glu Val Ala Leu Ile Val
50 55 60

Phe Ser Ser Arg Gly Arg Leu Tyr Glu Tyr Ser Asn Asn Ser Val Lys
65 70 75 80

Gly Thr Ile Glu Arg Tyr Lys Ala Ile Ser Asp Asn Ser Asn Thr
85 90 95

JST_A181-08US Sequence Listing (Amended).txt

Gly	Ser	Val	Ala	Glu	Ile	Asn	Ala	Gln	Tyr	Tyr	Gln	Gln	Glu	Ser	Ala
100						105							110		
Lys	Leu	Arg	Gln	Gln	Ile	Ile	Ser	Ile	Gln	Asn	Ser	Asn	Arg	Gln	Leu
115							120						125		
Met	Gly	Glu	Thr	Ile	Gly	Ser	Met	Ser	Pro	Lys	Glu	Leu	Arg	Asn	Leu
130							135					140			
Glu	Gly	Arg	Leu	Glu	Arg	Ser	Ile	Thr	Arg	Ile	Arg	Ser	Lys	Lys	Asn
145							150					155			160
Glu	Leu	Leu	Phe	Ser	Glu	Ile	Asp	Tyr	Met	Gln	Lys	Arg	Glu	Val	Asp
							165					170			175
Leu	His	Asn	Asp	Asn	Gln	Ile	Leu	Arg	Ala	Lys	Ile	Ala	Glu	Asn	Glu
							180					185			190
Arg	Asn	Asn	Pro	Ser	Ile	Ser	Leu	Met	Pro	Gly	Gly	Ser	Asn	Tyr	Glu
							195					200			205
Gln	Leu	Met	Pro	Pro	Pro	Gln	Thr	Gln	Ser	Gln	Pro	Phe	Asp	Ser	Arg
							210					215			220
Asn	Tyr	Phe	Gln	Val	Ala	Ala	Leu	Gln	Pro	Asn	Asn	His	His	Tyr	Ser
							225					230			235
Ser	Ala	Gly	Arg	Gln	Asp	Gln	Thr	Ala	Leu	Gln	Leu	Val			
							245					250			

<210> 141
<211> 762
<212> DNA
<213> Arabidopsis thaliana

<400> 141
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cgttagaaatg gtttgctcaa gaaagcttac gagctctctg ttctttgtga tgctgaagtc 180
gcactcatcg tcttctctag ccgtggcgt ctctatgagt actctaacaa cagtgtaaaa 240
gggactattg agaggtacaa gaaggcaata tcggacaatt ctaacaccgg atcgggtggca 300
gaaattaatg cacagtatta tcaacaagaa tcagccaaat tgcgtcaaca aataatcagc 360
atacaaaact ccaacaggca attgatgggt gagacgatag ggtcaatgtc tcccaaagag 420
ctcaggaact tggaaaggcag attagagaga agtattaccg gaatccgatc caagaagaat 480
gagctttat tttctgaaat cgactacatg cagaaaagag aagttgattt gcataacgat 540
aaccagattc ttcgtgc当地 gatactgaa aatgagagga acaatccgag tataagtcta 600
atgccaggag gatctaacta cgagcagctt atgccaccac ctcaaacgca atctcaaccg 660
tttgatttc当地 ggaatttattt ccaagtgc当地 gcattgcaac ctaacaatca ccattactca 720
tccgc当地 ggc当地 gccaagacca aaccgctctc cagtttgtt aa 762

<210> 142
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 142
agttagttac ttaagcttgg gcccc

JST_A181-08US Sequence Listing (Amended).txt

<210> 143

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 143

gatccagtaa gcttaattgg ttccggcgcc

30

<210> 144

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 144

tagaattcgc ggccgcactc gag

23

<210> 145

<211> 31

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 145

gagaattcgg gccagagctg cagctggatg g

31

<210> 146

<211> 82

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 146

ctagaggatc cacaattacc aacaacaaca aacaacaaac aacattacaa ttacagatcc 60
cgggggtacc gtcgacgagc tc 82

<210> 147

<211> 73

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

JST_A181-08US Sequence Listing (Amended).txt

<400> 147
cgtcgacgggt acccccccggga tctgttaattt taatgttgtt tgttgttgt tgttgttgtt 60
aattgtggat cct 73

<210> 148
<211> 43
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 148
gggccttgatc tggatctaga actccgtttg ggtttcgctt aag 43

<210> 149
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 149
tcgacttaag cgaaacccaa acggagttct agatccagat caagccc 47

<210> 150
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 150
atgaccgcgt accaatcgga gctaggagg 29

<210> 151
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 151
cactaactgg agagcggttt ggtctggcg 30

<210> 152
<211> 6
<212> PRT
<213> Artificial Sequence

JST_A181-08US Sequence Listing (Amended).txt

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Amino Acid Sequence

<400> 152

Asp Leu Ser Leu Asp Leu

1 5

<210> 153

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 153

gatcttagcc taagcctg

18

<210> 154

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 154

caggcttagg ctaagatc

18

<210> 155

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 155

gatgatgtca aaatctatga gcatatc

27

<210> 156

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 156

tccactacca ttcgacacgt gac

23

<210> 157

<211> 30

JST_A181-08US Sequence Listing (Amended).txt

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 157

gatgggtcat cactcatgct gcaacaaggca

30

<210> 158

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized Primer Sequence

<400> 158

agttatgacg tactgtccac aagagattgg

30

<210> 159

<211> 75

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 159

gatccacaat taccaacaac aacaaacaac aaacaacatt acaattacag atcccggggg 60
taccgtcgac gagct 75

<210> 160

<211> 67

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 160

cgtcgacggt accccccggga tctgttaattg taatgttgtt tgttgttgt tgttgttgt 60
aatttgtg 67

<210> 161

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 161

gatggcgaga gggaaatcc agatcaag

28

JST_A181-08US Sequence Listing (Amended).txt

<210> 162
<211> 25
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 162
ttcaagaaga tggaaaggtaa tgatg

25

<210> 163
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 163
ctggatctgg atctagaact ccgttgggt ttgccttaag

40

<210> 164
<211> 40
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence:Artificially
Synthesized DNA Sequence

<400> 164
cttaagcgaa acccaaacgg agttctagat ccagatccag

40